

Macroprudential policy: an institutionalist interpretation

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ABSTRACT

One of the consequences of the recent international economic crisis has been the demand for new economic policy tools, to add to the well-established monetary, exchange-rate, and fiscal policy mechanisms. In particular, more effective ways are needed to regulate the financial system and prevent the emergence of imbalances that affect the real economy. In that context, macroprudential policy has been singled out as another economic-type public policy which could help maintain financial stability. Nonetheless, the discussions and development of the literature on this topic are founded on pragmatic considerations that are not directly related to the orthodox or heterodox schools of economic thought. So the aim of this article is to provide an institutionalist reading of macroprudential policy, to understand it in terms of the theoretical content of institutional approaches.

KEYWORDS

Economic crisis, economic policy, financial policy, economic regulation, financial regulation, economic stabilization

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I

Introduction

The recent economic crisis highlighted the need to implement a broader set of economic policies, in addition to the well-established exchange-rate, monetary and fiscal interventions. The excesses that led to the crisis created a demand for new mechanisms to restrict the scope of financial liberalization, with a view to avoiding cyclical tipping points and their serious negative consequences for production, employment and wealth creation. In that context, macroprudential policy has gained importance both in the academic literature on economic policy regimes (Galati and Moessner, 2010; Landau, 2009) and in speeches made by the representatives of multilateral organizations, central banks, and policy makers (Bank of England, 2009; IMF, 2011; Blanchard, Dell’Ariccia and Mauro, 2010; and Bernanke, 2011).

Nonetheless, macroprudential policy remains the subject of an inconclusive debate in the economic literature; and, for example, it has not yet been decided whether one should refer to macroprudential policy as such or simply macroprudential measures.¹ In contrast, there is some consensus on the objectives that macroprudential actions should pursue: first and foremost, the supervision and regulation of bank and non-bank financial institutions so as to contain the systemic risk of systemwide insolvency. The rationale consists in mitigating the two dimensions of systemic risk—their procyclical nature and the interlinkage between national and foreign institutions—to achieve more permanent financial stability. The development of the literature on the subject is founded on pragmatic considerations that are not directly related to the orthodox or heterodox schools of economic thought, which means that the debate on macroprudential policies lacks a theoretical

perspective to underpin their use. This absence justifies the work underlying this article.

Institutionalism stresses the relations that exist between the political and economic spheres of society. For example, Zysman (1983) argues that the different institutions of the financial system, actively formed by public policies, entail divergent forms of financing and economic growth. North (1990) highlights the institutional dynamic of societies as central to the economic development they achieve. To that end, a number of political elements, such as guaranteed property rights and maintenance of the stability of contracts, would reduce transaction costs and enhance economic efficiency, and thus lead to favourable development paths. Based on the concept of the legal-economic nexus, Samuels (2007) outlines how public policies translate into different strategies within firms, since regulations, defined in the political sphere of society, delineate the profile that markets will have. In an attempt to reconcile the institutionalist and post-Keynesian notions, Conceição and Ferrari-Filho (2001) argue that the Keynesian idea of the socialization of investments can be understood as the construction, through public policies, of an institutional environment that fosters productive investment and in which the cyclical movements that condition monetary economies of production are mitigated. It is therefore no novelty that the institutionalist theory, in its various guises, is used to understand how public policies constitute different institutional frameworks, giving rise to diverse patterns of individual behaviour and, ultimately, different paths for the economic system.

Against that backdrop, this article aims to provide an institutionalist reading of macroprudential policy. The argument on which it is based stems from the fact that when the aforementioned policy is analysed from an institutionalist standpoint, it can be understood as the source of an institutional framework that shapes a more stable financial system. Despite their disperse nature—owing to the lack of a regime defined in terms of instruments, executing authorities and intermediate targets—it is argued that macroprudential measures can function as a public policy that curtails the higher-risk financial operations of bank and non-bank institutions, and thus helps to prevent financial bubbles and their consequent effects on the real economy. Drawing its inspiration from a paper by Goudard and Terra (2013),

¹ A clarification needs to be made at the outset. Although in Brazil the tendency has been to speak of macroprudential measures, the foreign literature gives them policy status. So, are we dealing with a policy, in the sense of a systemized regime for using macroprudential instruments, which is consistent with other economic policies and implemented by a specific institution; or is it simply a matter of individual and circumstantial measures? This article takes the view that macroprudential policies can be considered as a policy, which includes measures to regulate the financial system and is consistent with other policies. Thus, macroprudential measures are ways of applying macroprudential policy. The international literature, both institutional (IMF, 2011; Bank of England, 2009, and BIS/IMF/FSB, 2011) and academic (Caruana, 2010; and Galati and Moessner, 2010), also accords policy status to macroprudential measures.

which makes a Keynesian reading of macroprudential policy, this article follows a similar line, but with a view to contributing to the debate from the standpoint of institutionalist theory.

The article is divided into four sections apart from this introduction. Section II presents the approaches of the old or original institutionalism, neo-institutionalism and the new institutional economics; and it draws on the neo-Schumpeterian contributions

that complement the institutionalist theory and the analysis of macroprudential policies. Section III reviews the literature on macroprudential policy, including its origins, objectives, instruments and interactions with the other economic policies. Section IV establishes a link between the second and third sections by analysing macroprudential policy within an institutionalist framework. Lastly, section V presents the final thoughts of the study.

II

Institutionalist approaches

Samuels (1995) and Conceição (2002a) argue that the richness of institutionalist thinking lies in the plurality of approaches that stem from the different schools that address the topic of institutions, albeit not always on a convergent basis. In those circumstances, the very concept of institution takes on different meanings. An analysis of institutionalism following a single approach impoverishes its theoretical and analytical power, which draws most strongly on multiplicity and interaction. Yet that same breadth makes it hard to expound all of the approaches and raises the risk that the different perspectives may be mutually inconsistent. To overcome this dilemma without losing sight of the virtues of pluralism, this article sketches the history of the approaches and identifies the concept of institution adopted by each one. In particular, the article describes the schools of the old institutionalism, neo-institutionalism and the new institutional economics.

According to Hodgson (1993 and 1998), Conceição (2002a, 2002b and 2008), Samuels (1995) and Villeval (1995), among others, institutionalist thinking stems from the old institutionalism of Thorstein Veblen, John Commons and Wesley Mitchell in the United States. For those authors, the concept of institution is centred on the set of habits, norms, values, beliefs, symbols and socially learned and shared patterns that imply certain individual and social behaviours, and their evolution. For Veblen (1919, p. 190), institutionalism is the “theory of the process of consecutive change, which is taken as a sequence of cumulative change, realized to be self-continuing or self-propagating and to have no final term”. Thus the situation prevailing today shapes the institution of tomorrow through a selective and coercive process, by changing the way men habitually see things. According to Commons (1931, p. 648), however, institutions are

collective action in control, liberation and expansion of individual action. Hodgson (1993) characterizes the old institutionalists essentially as evolutionists, and claims that they stress the importance of understanding the processes that change the constituent elements of institutions, as a way of understanding the dynamic of the economic system. They thus reject the neoclassical ideas that see the individual as passive, independent, inert, and with given preferences (according to methodological individualism), and that production technologies are given.

Two concepts formulated by the old institutionalists are particularly important for this study: that of “embeddedness” and what Veblen calls “imbecile institutions”. The first refers to the way institutions become socially embedded after they have been formed. For Polanyi (1944), institutions arise either unintentionally (“organic” institutions, which are rules and customs that emerge from individual interactions), or else intentionally (“pragmatic” institutions, created to solve a conflict of individual, group or social interest). Once perceived and understood, the institution goes through a process of social acceptance that may or may not become effective, depending on the legitimacy and collective valuation it receives. If the institution is incorporated into the institutional order and becomes shared in habit, it can be said to have become embedded or integrated.

The embedding of institutions that do not generate social benefits forms what Veblen called “imbecile institutions” (Arthur, 1989), intentionally constituted or otherwise, whose results in some way cause difficulties in the systems in which they are inserted. For example, several financial institutions (either the firms themselves or the financial products) turned out to be “imbecile”, because despite the momentary gains they generated

caused losses that extended far beyond the financial sector of the economy.²

Having lain forgotten for several decades, institutionalism was rescued in the 1960s by the exponents of two approaches: neo-institutionalism and new institutional economics. The first constitutes a thorough revival of the old institutionalism, including its opposition to neoclassicism; and the institutions are both a shared habit according to Veblen (1919), and collective action according to Commons (1931). Hodgson (2002), one of the pioneers of neo-institutionalism, defined institutions as lasting systems of embedded and established social rules that structure social interactions.³ Their durability stems from the fact that institutions create stability in expectations and individual habits and allow for organized thoughts and actions, because they shape and give consistency to human activities. According to Hodgson (2004, p. 652), in defining the term “institutions” it is essential to take account of the concept of habit, which—in conjunction with the institution itself—represents the hard core of neo-institutionalism and should be understood as the propensity to behave in a given way in a particular kind of situations.

Individuals are influenced by the institutional environment to which they are subject (and in which the manifestation of collective action is found, whether intentional or not), which will involve different predispositions, or diverse habits. For Hodgson (2004), habits are not the individuals’ real behaviour patterns, but their active and reactive propensity or capacity to deal with the complexity, environmental change and uncertainty in which they are inherently circumscribed. Consequently, despite being closely related, habit and behaviour are not the same thing. If we acquire a habit we do not necessarily use it all the time. A habit is a disposition to engage in a previously-adopted or acquired behaviour or thought, triggered by an appropriate stimulus or context (Hodgson, 2006, p. 6). Thus, habit is a propensity towards a specific way of thinking and behaving, such that the acts in question express the habits, but are not the same as them.

Consequently, the idea of habit encompasses all selective and coercive factors to which the individual is submitted and which, in addition, make it intelligible not

merely as a piece of data but as a multi-determinate and active element, which cannot be reduced to methodological individualism. For that reason, neo-institutionalists rescue the old institutionalism’s explanation for the existence of social, political, economic, cultural institutions in a model of individual behaviour which, nonetheless, is not subordinated to the individual, but highlights human interaction and its social outcomes.

Habits are not merely constraints that inhibit action; they can also encourage activity, because they create socio-institutional stability: institutions both constrain behaviour and enable it. Although the existence of rules implies constraints, these can open up possibilities: they may enable choices and actions that otherwise would not exist (Hodgson, 2006, p. 2). In that sense, the coercive process is more than the inability to do something; it refers, above all, to the most stable path that human action can take, since this entails a solid path along which one can proceed, while also opening up a margin to explore adjacent areas (Conceição, 2002b).

For neo-institutionalists, individual movement and institutional dynamic are reciprocally causal; in other words, individuals shape institutions just as institutions shape individuals. This process is referred to as reconstitutive causation, and can adopt an upward or downward direction in which each stimulus will produce a reaction, entailing institutional change. According to Hodgson (2004) the main point of the argument is to recognize that that process occurs more significantly with respect to habits than with respect to behaviour, beliefs or intentions. Thus, habit becomes the crucial and invisible link of the causal channel (Hodgson, 2004).

The second approach, new institutional economics, defines institutions as mechanisms of collective action that attempt to solve the conflict between individuals and increase the efficiency of businesses to promote greater economic development. A society’s institutional matrix consists of the rules of the game invented by the individuals themselves. These can either be formal (decided upon politically, as laws, codes, resolutions and norms); or else they can be informal (culturally established as conventions, moral and ethics, and religious principles). Institutions relate to a large degree with mental models, since they are representations of the individual created by the cognitive system to interpret, organize and structure the external environment. Established institutions constrain individual behaviour and determine economic performance (North, 1994).

Villevall (1995) defines new institutional economics as a functional theory that focuses on the solution of problems, such as uncertainty and transaction costs,

² The recent economic crisis provides an example of the problems that can arise from financial innovations such as collateralized debt obligations; asset-backed commercial paper and repos, among others. For examples see Krugman (2009).

³ In this meaning (which has a notable historical pedigree), examples of institutions include language, money, the financial system, the weights and measures system and firms. For further details see Hodgson (2002).

which aims to compensate for market failures and set limits on individual behaviour. It thus ends up relating, in general, to the coordination of typically interactive individual actions. The conception of new institutionalist economics serves to structure the social order in a context of asymmetric attributions and information, with a view to stabilizing the commitments involved in property rights and, consequently, individual expectations themselves on collective action.

Given its microfoundations —based on aspects such as transaction costs, opportunism to make quick individual profits to the detriment of activities that offer greater social benefits, and property rights, among others— this perspective is closer to the neoclassical approach, thus positioning itself in the main current of economic thought. The analytical framework of new institutionalist economics is thus a modification of neoclassical theory. It conserves the fundamental hypotheses of scarcity and competition and the analytical tools of microeconomic theory. It also changes the assumption of rationality and adds the time dimension (North, 1994, p. 359). For that reason, some authors, such as Hodgson (1998) and Dugger (1990), advocate caution in incorporating new institutional economics as an “original” institutionalist approach, owing to its closeness to neoclassicism, the target of the opposition of the old institutionalists. In contrast, Samuels (1995) considers that new institutional economics, along with neo-institutionalism, made significant contributions to the institutionalist paradigm, whether of more orthodox or more heterodox influence (Conceição, 2002b, p. 612). Stanfield (1999) also considers the progress made by new institutional economics to be relevant, particularly in systematizing many aspects that the old tradition dealt with informally, and overcoming the shortcomings of neoclassical theory.

To incorporate more theoretical contributions to the analysis of macroprudential policies in institutionalist terms, various aspects of neo-Schumpeterian theory may be valid, since they provide elements for understanding the behaviour of financial institutions, which are the control target of macroprudential measures. The relation between the institutionalist theory and the evolutionist theory dates back to Veblen, who was probably influenced by Darwin, given the idea that the role of instincts, habits and institutions in economic evolution is analogous to the role played by genes in biology (Conceição, 2002b, p. 609). Moreover, institutionalism is in practice evolutionist, because it: (i) includes path dependency; (ii) denies equilibrium; (iii) is focused on the process of change (economic, technological, institutional)

in a temporal, historical and dynamic vision; and (iv) understands the cumulative nature of social change. In line with this argument, Samuels (1995) states that technological development is the main source of change in the economic system, which in turn can be interpreted as one of the paths through which society’s institutional organization is modified.

Nelson (2002 and 2008) sought to understand how institutions promote or obstruct the implementation of technological changes. As is widely known, Schumpeter (1952) sees technical progress as the causal factor of economic development, whereas extra-economic aspects, such as legal, political and institutional factors, constrain the innovative capacity of firms (Possas, 2006). Institutional and technological movements are interrelated, such that institutional evolution leads to the progression of systems and vice versa, in a dynamic that can be explained through the neo-institutionalists’ reconstitutive downward causation (Hodgson, 2000a and 2000b). According to North (1994, p. 361), it is the interaction between institutions and organizations that shapes an economy’s institutional evolution. If institutions are rules of the game, organizations are the players. In short, there is a circular causation between the institutional matrix, technological change and economic development; these three elements are interwoven and reciprocally constrain each other all the time. Consequently, evolutionists perceive a strong interrelation between development, growth, technical innovation and the institutional apparatus, which shows that these concepts cannot be understood in isolation. Although institutions are not a central unit of analysis for evolutionists —as they are in institutionalist approaches— they are nonetheless inseparable elements of the dynamic process of growth and technological change (Conceição, 2002a, p. 139).

Considering innovations in the financial system, Minsky (1986) notes that the relation between the institutional scenario that is continuously changing towards greater deregulation and financial institutions seeking higher profits, gave rise to routines of financial innovation. The management of bank balance sheets was consolidated as a strategic way for financial firms to capture resources in different ways and maturities and to sell assets of different kinds. The contributions made by Nelson (2002 and 2008) and Possas (2006) show that the innovation possibilities of firms in the financial system depend on the obstacles and permits defined by the regulation imposed by the economic authorities. Thus, restrictions on the financial market stem not only from the effects that competitive advantages constructed through successful strategies impose on the other competitors

and on the demand for credit. Public policies, whether monetary or macroprudential, also have the capacity to restrict or encourage competitive alternatives, which highlights the role of the relation between institutions and the processes and products of the financial system.

For example, Krugman (2009) shows that co-protagonists in the recent economic crisis were firms operating in the so-called “shadow banking system”, which engaged in the typical activities of banks but were not considered as such in the regulatory institutional framework, so they were outside the scope of regulation. Those firms developed financial services that were leveraged and chained with the traditional banks, which intensified the contagion of the crisis. If the institutions had not allowed operations of that type, the financial bubble that triggered the crisis might not have attained the proportions that it did.

The concept of institutions varies according to the different schools of thought; and, following Fonseca (2003), this article seeks to examine the elements that each can contribute to the analysis of macroprudential policies. According to Fonseca, institutionalisms, although different, are not incompatible, because nothing prevents their joint use in a study, particularly by stressing relevant aspects that the breadth and richness of the term *institution* may encompass (Fonseca, 2003, p. 135, italics in original). Accordingly, given such diversity, how will a notion of institutions be synthesized, and how will the institutionalist perspectives be articulated to achieve the purposes of this article?

According to the classics and the neo-institutionalists, institutions are essentially individual and social habits which, when interrelated, become agents’ behavioural propensities,⁴ which are more or less stable, and imply a certain stability in the socioinstitutional profile. In this context, stable in no way means static, either in relation to individuals or in terms of institutions. There is an intensive causal circularity between subject and society, according to the model of upward and downward causalities, which culminates in institutional evolution through time. Depending on the prevailing structural and circumstantial conditions, institutional change can occur radically, completely altering the previous pattern. Firms play a fundamental role in that process by implementing the technological innovations that invigorate institutional change, as can be inferred by relating the institutionalist and neo-Schumpeterian contributions.

⁴ Behavioural propensities are understood as legal provisions that allow individuals to behave in a certain way in certain situations.

Moreover, based on the theoretical development of new institutionalist economics, the construction and stability of habits, in terms of the elements that define the economic sphere, can reduce transaction costs, thereby helping to stimulate businesses and, ultimately, economic development. The relevant elements for promoting lower transaction costs are not restricted to the aforementioned sphere, but encompass the political, juridical and even cultural domains. Above all, public policies can forcibly construct habits and define behavioural responses — with downward causation which Hodgson (2000b) defines as top-to-bottom. In that regard, macroprudential measures as public policies — considered from an institutionalist standpoint— can promote different habits and rules of the game in the businesses of the financial system, thereby helping to give it greater stability.

In this context, the following articulation between the institutionalisms is suggested:

- (i) Based on the new institutional economics, macroprudential policy defines a set of rules which, in the short term, regulate individual behaviour, both of persons and of financial institutions. In this domain, the institutional nature of the regulation defines the paths that can be profitably explored and the spaces to which the regulator wishes to prevent access.
- (ii) Based on the old institutionalists and the neo-institutionalists, according to the interplay of forces that unfolds between those who formulate the regulations (regulators) and those who directly or indirectly suffer their effects (the regulated),⁵ the application of regulation is strengthened, and in the medium to long run, it becomes an institutional matrix —in other words a set of individual and social habits which are both formal and informal.

Thus, one is not proposing a hierarchy of institutional approaches ranked according to the relevance of their interpretation of macroprudential policy; on the contrary and as described in the previous paragraph, the combination of the two gives rise to a dynamically constructed institutional matrix. This encompasses institutions in the short term, in other words the rules of the game; and a more permanent institutional framework, despite its inherently dynamic, and thus

⁵ For example, setting age limits for the purchase of alcoholic beverages is a direct regulation not on the industry, but on consumer freedom; but by restricting the consumer market, the effects of the regulation affect the industry indirectly. Analogously, by prohibiting the production of a certain good or service, the industry is regulated directly, whereas the consumer is indirectly affected by the nonexistence of supply.

evolutionary, nature. In this context, account is taken of the economic-legal nexus proposed by Samuels (1995), in which the political sphere partially defines the non-economic boundaries of the market, which, nonetheless, imply economic behaviours in firms and

consumers. Those behaviour patterns are not neutral and partially define the boundaries of the market. From this constant confrontation, and in repeated cumulative causation, the passage of time spawns habits of behaviour and thought.

III

Macroprudential policy

The sub-prime mortgage crisis called into question the efficient-market hypothesis, which postulates that the maintenance of the price level alone guarantees efficient resource allocation and, hence, financial stability. With the crisis, macroprudential policy has gained importance and there seems to be consensus (if not theoretical at least pragmatic) on the need to adopt it to maintain financial stability. In the words of Clement (2010, p. 59), “a core element of the international policy response to the crisis is to strengthen the macroprudential orientation of financial regulation and supervision, i.e. an enhanced focus on the financial system as a whole and its link to the macroeconomy.” Along the same lines, Galati and Moessner (2010, p. 2) note:

“A failure to appreciate how aggressive risk-taking by different types of financial institutions —against the background of robust macroeconomic performance and low interest rates— supported a massive growth in balance sheets in the financial system. [...] There was also insufficient recognition of the role of financial innovation and financial deregulation in magnifying both the boom and the unwinding of financial imbalances and their consequences on the real economy.”

According to Clement (2010), the term “macroprudential” first appeared in unpublished documents in the late 1970s, and then in published references as from 1980 —a period when the authorities were increasingly worried about the macroeconomic and financial stability implications of the rapid pace of lending to developing countries, and were examining [new] policy options to deal with them (Clement, 2010, p. 60). Initially, the macroprudential perspective focused on the microeconomic environment, in which institutions are analysed individually. That environment was then expanded because microprudential measures proved ineffective and led to analytical errors, for while

the individual growth of a given bank might seem sustainable, the system as a whole might not be, so that the instabilities affecting the market were not evident at the microprudential level. Table 1 shows the difference between the macro- and microprudential perspectives.

As can be seen, the macro level encompasses the financial system as a whole, whereas the micro level corresponds to institutions, both banking and nonbanking, and individuals or customers, separately. This means that the objectives, concerns, risks and, therefore, the instruments are different in the two environments. For the IMF (2011) the macroprudential rationale is, apart from an evolution, a complement to the microprudential rationale; and, in practice, it is hard to clearly separate the two prudential levels, because, irrespective of the differences between them, financial stability is a common goal, “reflecting the far reaching consequences of financial crises” (IMF, 2011, p. 10).

1. Objectives of macroprudential policy

In general, macroprudential policy aims to control systemic risk and financial stability and, hence, regulation of the business cycle that can arise from crises that have their origins in the financial market. Nonetheless, there is no consensus as to the definition of such stability and the risk profile. The debate is split between authors who postulate that risk is exogenous, as it is associated with behaviours outside the market that have repercussions inside of it, such as credit rationing (Stiglitz and Weiss, 1981) or asymmetric information (Stiglitz and Weiss, 1992); and those who argue that risk is endogenous, following Minsky (1986) and Keynes (1943).

“Thus, it is possible to separate the different visions into two large groups: the first defines financial stability in terms of the financial system’s robustness to external shocks [...] The second emphasizes

TABLE 1

Comparison of the micro- and macroprudential perspectives

	Macroprudential	Microprudential
Immediate objective	Limit the risk of the financial system as a whole	Limit the risk of institutions individually
Final objective	Avoid macroeconomic costs arising from financial instability	Protect depositors
Risk characterization	Endogenous (depends on collective behaviour)	Exogenous (independent of agent behaviour)
Correlations and exposures that are common to the institutions	Important	Irrelevant
Calibration of prudential controls	In terms of systemic risks	In terms of the risks of each institution

Source: Prepared by the authors on the basis of C. Borio, “Towards a macroprudential framework for financial supervision and regulation?”, *CEifo Economics Studies*, vol. 49, Oxford University Press, 2003.

the endogenous nature of financial distress and describes financial stability in terms of resilience to shocks originating within the system” (Galati and Moessler, 2010, p. 5).

According to Brunnermeier and Sannikov (2009), a central objective of macroregulation is to offset the natural reduction in the estimated risk during an expansionary phase and its subsequent growth in the downswing. According to the Bank of England (2009), although the goal of macroprudential policy should be the stable supply of financial intermediation services for the economy, trying to avoid the boom-bust cycle in the supply of credit and liquidity, in general, this should not be used to avoid bubbles and imbalances. In contrast, Landau (2009) argues that avoiding economic bubbles could be one of the tasks of macroprudential measures. For Caruana (2010), the aim is to reduce systemic risks by explicitly addressing interconnections and exposures between all agents and the procyclical nature of the financial system. Lastly, Perotti and Suárez (2009) believe macroprudential policy should discourage individual bank strategies that cause systemic risks, in other words those that impose a negative externality on the financial system. Despite a certain degree of dispersion, it can generally be concluded that the control of systemic risk and financial system instability are the most frequent targets of macroprudential policy.

2. The two dimensions of systemic risk and macroprudential instruments

Systemic risk has two dimensions: a time dimension and a cross-section dimension. The first relates to how risk evolves through time; the second, to the way risks are distributed across the institutions of the domestic or

external financial system (the cross-section dimension can be referred to as the cross-border dimension when it involves transactions with the rest of the world) (Crockett, 2000). According to BIS/IMF/FSB (2011, p. 2), the key issue in the time dimension is to mitigate or dampen the procyclicality of the financial system, whereas in the cross-section dimension, the aim is to reduce the exposure of financial institutions by containing their linkages with other institutions. Under that rationale, instruments are needed to calibrate the systemic importance of individual institutions, taking account of the chances that their problems may be propagated to the system. Lastly, Clement (2010) stresses that, up to the crisis, the macroprudential policy debate focused on the problem of the time dimension, whereas the cross-section dimension gained importance more recently as a result of concerns relating to the problem of institutions that were “too big to fail.”

As in the case of other aspects of macroprudential policy already mentioned, there is still no consensus in the literature over its instruments. Despite research into a number of measures, no primary instrument has been identified nor has a standard taxonomy been created. The distinction between the macroprudential measures and other economic policies is not simple, because ultimately:

“One difficulty in delineating the boundaries of macroprudential policy is that other public policies also affect financial stability. While primary responsibility for ensuring the stability of the financial system needs to rest with macroprudential policy, other policies should be able to complement it. No matter how different policy mandates are structured, addressing financial stability and systemic risk is a common responsibility” (IMF, 2011, p. 9).

Given the difficulty in standardizing instruments that can be considered macroprudential, BIS/IMF/FSB (2011) created two possible categories, applicable to both bank and non-bank financial institutions: (i) instruments that are specifically conceived to mitigate the time and cross-section dimensions of systemic risk; and (ii) mechanisms that are developed for other purposes, but which can become macroprudential. Some examples of the latter include compulsory reserves, which control liquidity and can be used to

alleviate systemic risk; and capital controls, which make the monetary policy interest rate independent of international capital flows as a tool for achieving financial stability. Table 2 summarizes the main macroprudential policy tools. In general, these consist of measurements, observations, reports, disclosures, regulations and limits that reduce systemic risk. Each of the instruments includes various specific regulatory measures that the financial institutions have to comply with.

TABLE 2

Macroprudential instruments

Risk measurement	
Financial institutions	Calibrated risk measurements over the course of the cycle
Supervisory authority	Cyclical conditionality in classifying the supervision of firms; measures of systemic vulnerability as a basis for calibrating prudential instruments; communication of systemic vulnerability; application of stress tests.
Financial reports	
Accounting standards	Less use of procyclical accounting standards.
Prudential filters	Adjustment of accounting data to calibrate prudential instruments; normalization or moderation of macroprudential measures through moving averages.
Publicity	Disclosure of the various types of risk.
Regulatory capital	
Systemic capital surcharge; reduction in the sensitivity of capital requirements to the current point of the cycle; security requirements dependent on the business cycle for the provision of capital reserves of financial institutions; regulatory capital needs for specific types of exposure; relation between the supervision review and the state of the cycle.	
Liquidity fund	
Cycle-dependent liquidity requirements; limits on bank concentration, borrower, type of loan or source of funds; control of loans and reserve requirements in foreign currency to limit foreign exposure.	
Guarantee agreements	
Variable maturity and maximum conservatism in relation to the loan value; evaluation methodologies for collateral purposes; extension of the credit limit on the basis of increases in asset value; safety margin requirement throughout the cycle.	
Limits on risk concentration	
Quantitative limits on the growth of specific types of exposure; increase in the interest rate on certain types of loan.	
Remuneration systems	
Guidelines that connect the payment performance report with an ex ante measurement of long-term risk; expansion of equity with earned profits.	
Restrictions on profit distribution	
Limits on the payment of dividends in good times to help build capital buffers for recessionary periods.	
Insurance mechanisms	
Capital contributions for contingencies; insurance for average systemic risk financed by rates related to the growth of bank assets over a certain limit; insurance deposits with a premium that is sensitive to systemic risk and underpinned by microeconomic parameters.	
Management of failures and resolutions	
Activation points of a more rigid control at times of expansion	

Source: Prepared by the authors on the basis of G. Galati and R. Moessner, “Macroprudential policy —a literature review”, *DNB Working Paper*, No. 267, Amsterdam, De Nederlandsche Bank NV, 2010.

3. Interaction with other economic policies and the institutional design

An important aspect of macroprudential design is how it relates to other economic policies, particularly monetary, exchange-rate and fiscal policies. For Blanchard, Dell’Ariccia and Mauro (2010), the interaction was strengthened with the outbreak of the economic crisis, because the goals of monetary policy were called into question and it was assumed that this should not only pursue price stability but also affect the real variables of the economy and combat financial imbalances. Bernanke (2011) notes that, although in exceptional cases, macroprudential measures would be complementary to monetary policy in that sense.

In line with that point of view, Borio and Drehmann (2009) suggest that monetary policy should also be concerned for financial imbalances, because leaving financial instability to be tackled by macroprudential policy alone would be burdensome and difficult. Nonetheless, the very systemization of macroprudential policy interacts with monetary policy for price stability, because those measures can be used to manage the level of liquidity, credit expansion, capital flow and asset prices, which are transmission mechanisms of monetary policy. Inflation will thus be under control during supply and demand crises and, as a result, the sensitivity of interest rates to their variations will be reduced.

Another important point is to choose how monetary policy will be coordinated with macroprudential policy, since the two policies are both complements and substitutes at the same time: in some cases they are used jointly to achieve the established target, whereas at other times one of them is sufficient (Galati and Moessler, 2010). Under this rationale, it should be noted that a well-structured financial system is a prerequisite for an effective monetary policy, just as the quality of the currency is for an effective macroprudential policy. A poorly developed financial system weakens monetary policy and can overload the respective authorities; and an overly discretionary monetary policy can cause financial instability and nullify prudential efforts (Borio and Shim, 2007).

The complementarity between macroprudential measures and exchange-rate policy is more evident when these take the form of regulatory actions that control international capital flows, particularly financial ones. Capital controls seek to reduce external exposure, both through the procyclical dimension of the flows and through the global interlinkage of assets and liabilities between financial institutions. The inherent

volatility of speculative flow movements is reduced, so that: (i) the exchange rate becomes more stable and easier to manage; (ii) the external sector becomes more predictable, which makes it possible to anticipate the risks of exchange-rate crises; (iii) the pass-through of exchange-rate movements to domestic prices is diluted; and (iv) exchange-rate policy management is afforded greater flexibility, because the set of regulations can be amended according to circumstances, which implies countercyclical behaviour by the exchange-rate authority to combat the procyclical nature of capital flows.

Lastly, it is also possible to highlight the interaction with fiscal policy. To the extent that macroprudential policy makes it possible to make basic interest rates less sensitive, it tends to increase the stability of the time structure of interest rates. This helps to make the financial burden of the public debt at least easier to manage through time, because this type of yield curve improves public debt management, in terms of a more predictable servicing profile. It also stresses the coordination between macroprudential, exchange-rate and fiscal policies in which—through macroprudential measures in the foreign-exchange market—capital flows are managed and exchange-rate risk is reduced for countries that cannot issue external debt in their own currency, because the reduction in exchange-rate volatility reduces the fiscal costs of refinancing, amortization and interest payments.

The goals of macroprudential policy thus end up directly or indirectly supporting the conduct of the other economic policies, either by increasing their harmony, efficacy and independence, or by promoting financial stability. Nonetheless, despite the evident complementarity between policies, the institutional design of macroprudential policy is still controversial. The areas of debate include the following: (i) the question of the macroprudential authority, in other words whether that institution or some other should be the monetary authority (Lastra, 2003; Blanchard, Dell’Ariccia and Mauro, 2010, and IMF, 2011); (ii) the need for transparency and accountability by an institution that has agents both outside and inside the government, so as to guarantee effective and impartial application; and (iii) the promotion of international cooperation, with regulations that avoid arbitrariness between countries, thereby guaranteeing greater global financial stability.⁶

⁶ For further information on the institutional framework of a number of countries, see IMF (2011).

IV

Macroprudential policy: an institutionalist reading

The last part of the second section discussed how the old institutionalism, neo-institutionalism and new institutional economics were articulated to provide a theoretical framework for interpreting macroprudential measures. Based on the argument developed there, the first step in an institutionalist reading of macroprudential policy consists of defining the broad context in which such policy acts. Macroprudential measures consist, in the first instance and inspired in the new institutionalist economics, in regulating the role of the competitive strategies (in other words financial innovations) of banks and non-banks, ultimately to constitute a more stable financial system that promotes economic development and is not susceptible to economic and financial crises. In this regard, the public authority that must serve as macroprudential authority will be the regulator, while the firms within the system (banks and non-banks), families and non-financial firms that engage in transactions with assets and liabilities will be the regulated parties. Institutions arise out of the dispute between those agents as rules of the game. Their permanency and consolidation, in the form of a given institutional framework, will depend on how this dispute is perpetuated in a constant cumulative causation.

In this context, and on the basis of Schumpeter (1952) and Dosi (1988), financial innovations can be understood as an habitual practice of the firms within the system, serving as a competitive strategy in the pursuit of profits, growth and survival through time. As they occur within the confines of the financial market, inspired by the rationale of seeking exceptional profits, these innovations become endogenous to the economic system. Nonetheless, as shown by Zysman (1983), although these innovations in essence are not harmful to financial stability and, consequently, the economic system, they can become so when the new products and financial processes have a very high-risk profile and occur in an institutional framework that does little to inhibit systemic risk.

This does not mean that the agents of the financial system, whether banking or nonbanking institutions or families and non-financial firms, disregard the rules of the game; but that they exploit or avoid them, or

position themselves outside of them, stimulating the construction of habits that can generate a context of greater fragility. In that regard, the supply of assets does not occur independently of the demand for them, so enterprises and non-financial firms are responsible for validating the innovations launched on the market. By offering profits to their issuers and their holders, the new assets and liabilities end up being incorporated into investors' portfolios and are disseminated in the system through national and global interconnections.

Isenberg (2006) and Dimsky (2006) illustrate this logic for the United States financial system since the Second World War. As from 1970, the current system, characterized by regulation by segments in terms of modes of funding and the aim of the granting of loans, went through a process of deregulation driven by the search for market niches that would afford firms exceptional profits. Far from being a financial market trend, that process of deregulation was the result of long political debates to define the regulatory institutions. Isenberg cites a speech by then-President of the United States, Richard Nixon, which illustrates the way in which the institutional movement occurred politically: "a strong, efficient and flexible financial system [...] is one which allows financial institutions to adapt to the changing needs of borrowers and lenders [...] is free to make full use of technological innovations" (Isenberg, 2006, p. 378). According to Minsky (1986), this process fuelled an intensification of financial crises at the national level and, as shown by Krugman (2009), also on a global scale.

Institutions, as rules of the game, define the paths that can be profitably exploited, such as the financial segmentation in force in the United States until the 1970s, which did not lead that country into any crisis. On the contrary, the regulations that institute financial liberalization, in other words the elimination of macroprudential regulation, turned out to be promoters of cyclical crises, the recent example of which was the sub-prime mortgage crisis. Thus, institutions that do not set limits on speculative movements involve the formation of a system that allows for procyclical leveraging of risk assets, in the short term, which may be rapidly tradable and allow for series of financial derivatives at the national

and global levels. An institutionalist reading would say that, when they are bounded by unrestricted institutional matrices, the habits of the agents of the financial market increase the propensity of the system towards disequilibria, illustrating the casino which Keynes (1943) considered the financial market had become.

The reference to Keynes (1943) draws attention to an important informal institution that is present in financial systems: speculative behaviour. As Keynes (1943) points out, the rationale of these markets is aimed at speculative action which, for the author, means that investors do not observe the fundamentals of the firms quoted on stock markets, but are driven by the attempt to predict more quickly what the average conventional evaluation of market participants will be. To restrict that habit, which is informally established in financial markets, Keynes (1943) suggested using elements that hindered the free movement of agents (such as taxation), in a clear demonstration of how formal institutions can restrict informal ones. The recurrent nature of crises in developed and emerging countries shows, however, that little has been done to set up a long-term institutional framework to reduce speculative habits in the financial market. On the contrary, as noted by Arestis (2006), deregulation or liberalization of finances has increased worldwide.

All institutionalist approaches claim that the market, in this case the financial market, is not self-sufficient or self-regulated. In fact, it is determined by the institutional structure of societies, such that it only complies with the predominant institutions (Conceição, 2002a, p. 126), becoming what it is and fulfilling its specific functions owing to the institutions that operate as social control and are formed and function through it (Samuels, 1995). Macprudential policies can, therefore, give financial markets two types of institutionality. At the aggregate level, they will condition the boundaries of the financial system, making it more or less accessible to speculation. At the individual level, as rules of the game, they will construct individual habits, whether of the creditors or of the debtors, and thus create a framework of incentives and restrictions (Zysman, 1994). This highlights the relation between the micro and macro spheres, between the individual and the whole, which represent the cornerstone of the institutionalist paradigm as noted by Hodgson (1998 and 2004). Plott (1991) follows the same line of thinking by arguing that individual preferences and institutions form economic outcomes.

On this point, it should be noted that macroprudential policy restricts speculative financial activities and, by being politically debated and, after a time, legitimized

(captured by individual preferences and collective behavioural habits given that their ultimate aim is the common good), it becomes integrated or rooted as an institutional framework. Agents then habitually incorporate its presence in decision-making. In the words of North (1994, p. 359): “Institutions form the incentive structure of a society, and the political and economic institutions, in consequence, are the underlying determinants of economic performance.”⁷

It is also possible for institutions that permit financial innovations that increase the probability of a crisis to be established and to last. That institutional framework, such as the one which in the current crisis allowed for the existence of the shadow banking system (Krugman, 2009), can be considered a case of “imbecile institutions”. In that sense, the “lock-in effect”, can occur, according to Arthur (1989), since they are technical changes that are hard to reverse and require institutions to be created or existing ones to be adapted, since financial progress did not occur in a socially satisfactory way.

The imposition of macroprudential measures may cause short-term negative effects, both because of their resonance in preferences and individual behaviours, and because the financial sector can take reprisals against the economic authorities, or take time to adapt to the new rules for the conduct of operations and competitive strategies. Nonetheless, the idea is that the new short-term rules of the game confer greater stability on the financial system in the medium and long terms. In this context, the time and accumulation variables of industrial evolution are relevant. Firstly, socioeconomic changes take place through time, and it is in time were the learning process occurs. However, the relation between the rules of the game (macroprudential policy) and the players (the financial institutions) configures the profile of what the institutional structure will be. Secondly, according to Veblen, the situation today shapes tomorrow through a coercive and selective process that acts on habits and can change the point of view or mental attitude that is inherited from the past. That means that in the midst of their evolution, institutions are cumulative. In that sense, although the macroprudential constraint can be implemented with the current regulatory structure, that is not always possible due to accumulation, which may require considerable changes to the matrix of rules to establish new paths for financial system development.

⁷ Hence the importance of the state and its public policies, which hold a privileged social position by having legitimate power to legislate and guarantee the regulations.

In general, it is impossible to know financial institutions and their results a priori, because it is impossible to precisely define the consequences of actions (Dosi, 1988, p. 222)—a fact that applies to all policies. For that reason, and owing to the strategic behaviour of financial institutions, macroprudential measures, subject to cumulative causation, need to be constantly adapted to accompany the evolutionary nature of the economic system.. “The Federal Reserve has to be concerned with the effect upon stability of the changing structure of financial relations. [...] The Federal Reserve needs to guide the evolution of financial institutions by favouring stability enhancing and discouraging instability augmenting institutions and practices” (Minsky, 1986, p. 314).

It is interesting to note that macroprudential policy acts on the individual and social levels, because it regulates the agents’ demand for risk and the financial institutions’ supply of risk assets, the matching of which entails a greater probability that systemic risks will be incurred. As indicated in the micro and macro rationales of prudential policy, there is no disconnect between the part and the whole. The 2008 crisis showed that an institution that is too large may fail and bring down with it

a whole series of institutions with which it does business. In the view of Keynes (1943), however, the contagion effect and the crisis of mistrust result in a slower pace of economic activity. Thus, the bankruptcy of one or a few firms can pollute the entire economic system; and, as has been seen, macroprudential policy intervenes in the interaction between the part and the whole.

Lastly, the recent debates on macroprudential policy are compatible with the institutional approaches in their various perspectives and definitions of the concept of institutions—rules of the game which, once socially adopted, become habits. The specialized literature on macroprudential policies does not suggest the relation between the instruments and the institutionalist perspective. Nonetheless, this theoretical approach is relevant, because there is no logical or theoretical divergence, which strengthens the arguments in favour of macroprudential measures as a public policy of an economic nature, the aim of which is the stability of capitalist economies. If the policy goal is to reduce the instabilities inherent in the economic system, institutions need to change, for which macroprudential policies are tools that can give markets an appropriate institutional framework.

V

Conclusions

Approaching macroprudential economic policy on the basis of the institutionalist theoretical framework is not only an important task, but also necessary given the requirements imposed by the recent episodes of economic instability, including the 2008 crisis. In that regard, both Hodgson (2009, p.3) and Borio (2010, p.1), paraphrasing Friedman,⁸ state respectively “We are all institutionalists now” and “We are all macroprudentialists now”. Macroprudential policies are still a controversial issue, and the literature review included in this study diagnosed the lack of a theoretical basis to underpin them. There thus remains an apparent perspective of neutrality which leaves them under a pragmatic analysis. Nonetheless, it can be concluded that macroprudential policy is consistent with institutionalist thinking in its various currents; and it can be interpreted as

short-term regulations that limit and at the same time stimulate habits, thus forming an institutional matrix. This encompasses both formal institutions, of which macroprudential institutions form part, and informal ones. In particular, macroprudential measures are public policies of an economic nature with a normative regulatory bias aimed at promoting the stability of the financial system; and, for that reason, they can serve as an important tool to restrict potentially unstable paths and stimulate other more favourable ones for financing with stability.

As a theoretical study of economic policy, this article is naturally highly normative, but an attempt has been made to provide grounding through historical and recent examples. This does not mean, however, that macroprudential policies are the final solution for the financial problems that are afflicting modern capitalist economies, marked by intense and globalized financial flows. Accordingly, although they appear to be efficient

⁸ In his remark “We are all Keynesians now” (Borio, 2010).

economic policy tools and have been present in the literature for a long time, there are still many challenges to be faced with respect to macroprudential policies. These include: (i) more precise definition of its objectives; (ii) preparation of its instruments (particularly those related to the measurement and observation of systemic risks) and an understanding of its transmission channels; (iii) the preparation of an institutional framework and appropriate mechanisms of governance that allow for the constant and effective use of its measures, without the responsible authority suffering reprisals from the financial system; and, lastly, (iv) the promotion of international cooperation to ensure the effectiveness of macroprudential tools in a globalized world.

Macroprudential policy is one way to limit financial fragility and endogenous risk based on an institutional change that can cause a transformation in the institutional structure of the financial system. Consequently, liquidity preference among banks will not only respond to their procyclical analyses, but to a regulatory institution. Clearly, this could be a viable way to limit the systemic risks posed by competitive strategies and financial innovations—which result in leveraged and financially fragile positions among economic agents—particularly if, as in the institutional paradigm, individual preferences, institutions (in the broad sense) and technological changes are recognized as forming the main drivers of economic performance.

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